

## CLAIMS

1    What is claimed is:

1    1.    A method for profiling an executable hardware model, comprising the steps of:

2    (a)   selecting a plurality of profiling functions of a profiling process;

3    (b)   preprocessing an application having application functions targeted for  
4    implementation in reconfigurable logic for inserting calls to the profiling  
5    functions;

6    (c)   executing the application; and

7    (d)   generating a profile based on the profiling functions called during execution of  
8    the application.

1    2.    A method as recited in claim 1, wherein the profile includes at least one of a  
2    time taken by each application function, a number of calls to each application  
3    function, and a call graph for illustrating calls between functions.

1    3.    A method as recited in claim 1, wherein the profile includes at least one of  
2    dynamic control flow and memory transfers.

1    4.    A method as recited in claim 1, wherein the application is permitted to  
2    interoperate with an arbitrary external library.

1    5.    A method as recited in claim 1, wherein the application is written in a C  
2    programming language.

1    6.    A computer program product for profiling an executable hardware model,  
2    comprising the steps of:

3    (a)   computer code for selecting a plurality of profiling functions of a profiling  
4    process;

- (b) computer code for preprocessing an application having application functions targeted for implementation in reconfigurable logic for inserting calls to the profiling functions;
- (c) computer code for executing the application; and
- (d) computer code for generating a profile based on the profiling functions called during execution of the application.

7. A computer program product as recited in claim 6, wherein the profile includes at least one of a time taken by each application function, a number of calls to each application function, and a call graph for illustrating calls between functions.

8. A computer program product as recited in claim 6, wherein the profile includes at least one of dynamic control flow and memory transfers.

9. A computer program product as recited in claim 6, wherein the application is permitted to interoperate with an arbitrary external library.

10. A computer program product as recited in claim 6, wherein the application is written in a C programming language.

11. A system for profiling an executable hardware model, comprising the steps of:

- (a) logic for selecting a plurality of profiling functions of a profiling process;
- (b) logic for preprocessing an application having application functions targeted for implementation in reconfigurable logic for inserting calls to the profiling functions;
- (c) logic for executing the application; and
- (d) logic for generating a profile based on the profiling functions called during execution of the application.

1 12. A system as recited in claim 11, wherein the profile includes at least one of a  
2 time taken by each application function, a number of calls to each application  
3 function, and a call graph for illustrating calls between functions.

1 13. A system as recited in claim 11, wherein the profile includes at least one of  
2 dynamic control flow and memory transfers.

1 14. A system as recited in claim 11, wherein the application is permitted to  
2 interoperate with an arbitrary external library.

1 15. A system as recited in claim 11, wherein the application is written in a C  
2 programming language.